

Integration Science Technology with Islamic Values: Empowering Education Model

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ABSTRACT

This study sought to investigate and describe the dichotomous view of science and technology with the religious consequences of ambivalence in the Islamic education system. On one side considers the issue of Islamic educational institutions muamalah, not the main areas to be assessed; while on the other hand, Modernization of the Islamic education system will need to enter the general education curriculum. This study used a qualitative method with a case study approach. The results of the study showed that religious subjects only legitimacy to achieve the goal of a modern education system as well as a gap between the Islamic educational system with the teachings of Islam. Therefore, the integration of Islamic values into science and technology in the learning process is a necessity to improve the quality of Islamic education and is still lagging. Through this integration, the universality of Islamic values will underlie the development of science and technology and also the continuity of the educational process. Integration efforts are expected existence of Islamic educational institutions more effectively implement transformation of Islamic values into science and technology so that the implementation of the educational process can bring benefits to the welfare of mankind as a whole as well to eliminate the negative effects of science and technology as the basis for the modernization which is sometimes contrary to the values humanitarian, cultural and religious.

Keywords: *Islamic education, integration Islamic value, empowering education model*

1. INTRODUCTION

Formal judicial, national education goals is to increase faith and devotion to achieve the life of the nation ". The formula was published also in Law No. 20 of 2003 that one of the goals of national education is to "develop students' potentials to become a man of faith and devoted to God Almighty, noble character, healthy, faithful, capable, creative, independent, and citizens of a democratic and accountable"[1]. In this sense that the core goal of national education is a human who has a strong faith capacity accompanied by adequate competence.

In this context, education must be designed someone able to increase capacity in the mastery of science and technology and at the same time have a strong quality of faith to religion that believed (Muslims). Design education should integrate the value kauniah and qauliyah within the framework of learning that could stimulate the spirit of improving knowledge, attitudes, and behaviors needed in the context of contemporary life and the future accompanied by the charge values of religion (Islam) in the method and design of learning that is responsive to the development of science and technology [2].

The balance of reviewing science with religion needs to be done among Muslims in view of the fact that the development of science and technology in the education system seems less go hand in hand with the principles of religiosity, so it is feared the development and progress of science and technology does not have a foothold values of faith that can provide benefit people and nations in the broadest sense [3]. Social problems and crime are common,

and many do it by people who are academically highly educated, even qualified as corruption, drugs, illegal logging, and others, all of which can lead to social unrest and run off morality of individuals and society.

Efforts towards putting education on the ideal portion are still faced with the dichotomy of science that emerged in the practice of education, the science of religion is seen to have its own which is extreme poles apart with the general sciences. So naturally if the educational curriculum in schools in a planned separation between public science with theology, even more, troubling that the allocation of teaching hours for religious knowledge less percentage when compared with the general sciences. When in fact every aspect of knowledge should be able to reveal the relevance of religion (read: Islam) in all three axes of monotheism, the unity of knowledge; unity of life; and the unity of history [4]. The dichotomous view of the impact on the backwardness of Islamic civilization and the backwardness of science and technology in the Islamic world. This condition is caused by an accumulation of external factors and internal factors are also Muslims themselves, are less concerned about the freedom of intellectual reasoning and lack of respect for rational empirical study or the spirit of scientific and philosophical development.

Problems arising from the dichotomy of general sciences with the religious sciences, as follows: (1) Ambivalence in the Islamic education system; where for this, for such institutions to Islamic schools an image of itself as an Islamic educational institution considers the issue muamalah did not claim them; meanwhile, the modernization of the education system to include the general education curriculum in these institutions resulted in a shift in meaning that only religious

subjects into stamp stamped to achieve the goal of modern education system; (2) The gap between the Islamic educational system with the teachings of Islam; (3) The disintegration of the Islamic educational system, where each system (modern or general) west and religion remained adamant maintain selfhood; and (4) appears inferiority of Islamic education institution managements [5].

However, there is also an optimistic view that this century is the momentum towards the birth of Islamic science. Islamic Science nothing but a sustainable alternative to the secular western science with the main characteristics is the guiding naqliyah aqliyah or revelation that guides nature or human reason. The tendency will be born and the development of Islamic science certainly implications for the process of transfer of knowledge of all disciplines into the curriculum in the educational unit, especially for those madrassas that make Islam as institutional identity.

Departing from the above description, the author will explore further the various possibilities of integration between science and technology with the Islamic values which is basically a blend of science and religion in the practice of teaching in schools. Given the issues surrounding the integration of science these days is often echoed in line with the wishes of the majority of Muslims to improve and enhance the quality of Islamic education which is still lagging behind. Until now, there is still a gap between state should (*das sollen*) with actual (*das sein*) [6]. The implication, appears ambivalence and the disintegration of the science that led to the dichotomy of science in all its aspects.

Starting from this background it is interesting to discuss in more depth on "how science and technology can be integrated with Islamic values in the learning model era of change?" With the hope of offering the construction of thinking about learning paradigm based comprehensive values of religion (Islam) in order to produce learners are responsive to changes in science and technology with standard rests on the values of religion (Islam) [7].

2. DISCUSSION

The idea of integration of Islamic values and general knowledge is the concept of "old" is still relevant to discuss haingga now, considering this dichotomy has been entrenched since the Middle Ages ago, during the time dynasty Abasiyyah, but they also appear in the nature of Islamic education in Indonesia, However, the development of ideas to study it more in being able to provide a very broad spectrum, even be something interesting to be studied and examined critically and sharp, so the problem is the dichotomy of this science is not expected to have implications for wider implementation of Islamic education, especially amid efforts people Islam to reform in order to improve the quality of Islamic education is underdeveloped and marginalized [8].

Admittedly to scrape out the dichotomous issue is not an easy thing, because it will be dealing with the controversy between conventional thinking thoughts (traditional) with modern contemporary thought. At this time, among the Islamic community is still growing belief that only the sciences of religion that shall be studied by Muslims, while

secular sciences seen as a part of science that is not required even forbidden to learn.

It thus cannot be separated from the way of thinking that the revelation is the main source of knowledge, so that the ratio discriminates function and role as a source of knowledge. They consider the diametric differences between reason and revelation, so that when they understand the verses qauliyah as an object of study subject, they ignore the verses kauniyah that it is very important to understand the verses of Allah through his creation, both in the heavens and that is in the earth.

In Islam never looked at the science of religion (IMTAQ) and general knowledge (science and technology) separately, because both come from one source, namely God Almighty. Knowledge in the form IMTAQ is sourced direct knowledge of Allah, in the form of revelation through the Prophet Muhammad as his prophet. While knowledge in the form of science and technology, basically also come from God, which is acquired by humans through nature, reason / reason humans created by Allah [9]. Religion Islam wants his people are always learning, including the study of nature. One eighth verses of the Koran or ± 750 verses are verses kauniyah ie verses dealing with the phenomena of nature, all of which stimulate, rebuke and encourage Muslims to engage in activities that lead to the development of science. This is where the real Islam laid the integration of science with religion as fundamental to human assessed continuously through the depth of knowledge that humans can respond to the challenges of his time and become increasingly aware of the existence and power of God.

Integration can be defined as the process of integrating the values of a certain set against another concept so that it becomes a coherent whole and cannot be separated or the process of assimilation to be a coherent whole and round. Integration between IMTAQ and its essence is a blend of science and technology dimension of religion and science. Integration of science is an attempt to combine or integrate ontology, epistemology and axiology general sciences and religion in these areas [10]. Because of the integration, science will clear him, the spirit obviously has to always serve human values and virtues, not the other way become a tool of dehumanization, exploitation and destruction of nature.

In the perspective of Islamic epistemology, basically Islam does not recognize the dichotomy of science. It is based on the universality of the teachings of Islam itself covers all aspects of life and is in line with the functions of the Qur'an as a mercy to the worlds. M. Husen Sadar, a Muslim leader insisted that Islam as a religion, not polarize between science (science) and religion (religion) [3].

In Islam, the education system was built based on the paradigm of science intact, ie, the philosophy of "ilmullah". It is God who has created this universe with perfect and God is aware of everything. With this paradigm, no disintegration or dichotomous in Islamic education. All the objects of discussion in the curriculum is very useful as a tool to understand the breadth and Allah's wisdom and His teachings. This is the same also with the nature of the creation of man as a servant of Allah (QS Adz- Dzariyat: 56) and as a caliph in the earth (Surah Al-Baqarah: 31), so therefore, sciences that are all important causes boils and

deliver to the knowledge of "the Nature of the Most Single" which is the substance of all the sciences.

In Islam, it can be said that the study is a religious quest and essentially, the science is already contained in the Qur'an. Qs. Al-'Alaq: 1-5). Iqrobismirobbika! "Read in the name of Robb you." That is the search for knowledge must be based on faith and aims to taqarrub ila Allah, to draw closer to Allah SWT. Religion means knowledge and knowledge means religion. Even in a hadith narrated by Imam Al-Baihaqi, Imam Ibn 'Adi, Imam' Uqaili, and Imam Ibn Abd al-Barr, from Anas bin Malik r.a, Rasullullah SAW ordered his followers to seek knowledge to China.

More specifically, the integration of science and technology education and IMTAQ is necessary for four reasons. First, science and technology will give a blessing and a huge benefit to the welfare of mankind when science and technology is accompanied by the principle of faith and piety to Allah SWT. Conversely, without principle IMTAQ, science and technology can be misused on the goals that are destructive. Science and technology can threaten human values. If so, science is only valid methodologically but vanity and poor literal meaning [11].

Both, in fact, science and technology is the basis of modernism, has led to new patterns and lifestyles that are secularistic, materialistic, and hedonistic, very contrary to the values of the culture and the religion professed by our nations. Third, in life, people not only need physical needs, but also requires IMTAQ and religious values (spiritual needs). Therefore, the emphasis on one of them, it will only lead to a life crippled and one-sided, and violates the wisdom of God who created man in the unity of soul and body, spiritual and physical. Fourth, IMTAQ the foundation and most powerful base that will take humans achieve happiness in life. Without basic IMTAQ, all worldly attributes, such as wealth, rank, science and technology, and offspring, will not be able to alias failed to deliver human happiness. Progress in all of that, without faith and effort to seek the pleasure of Allah SWT, will only result in a mirage that does not promise anything other than false shadows. This is in accordance with the word of Allah in the Qur'an:

وَالَّذِينَ كَفَرُوا أَعْمَلِهِمْ كَسَرَابٍ بِقِيَعَةٍ يُحْسِبُهُ آلُظَّمَانِ مَاءً حَتَّىٰ إِذَا جَاءَهُمْ لَمْ يَجِدْهُ سَآئِبًا وَّوَجَدَ اللَّهُ عِنْدَهُ فُوفَةٌ حَسَابِهِ وَاللَّهُ سَرِيعٌ الْحَسَابِ 39

But for those who deny the Truth, their deeds are like a mirage in the desert, which the thirsty supposes to be water until he comes to it only to find that it was nothing; he found instead that Allah was with Him and He paid his account in full. Allah is swift in settling the account. (Q.S. An-Nur: 39). With respect to the reasons mentioned above, it is necessary to develop a business improvement is more fundamental to the approach and the learning method for example the efforts related to the psychology of learning, intensifying the program IMTAQ in schools one of which can be done by integrating the values of religion (IMTAQ) into each subject. In other words, the learning model must combine science and technology with IMTAQ. For the teachers as educators demanded to develop creativity and innovation in integrating the values of religion (IMTAQ) into each subject taught.

The practice of Islamic education should develop the integration of science to make education a more comprehensive (integral holistic) [12]. Because in essence,

Islam was never introduced the term dualism-dichotomous science as such. Two kinds of knowledge; public and religious, placed in position and the portion of impartial as the word of God Almighty in Qs. Al-Qasas: 77.

وَأَبْتَعْ فِيمَا آتَاكَ اللَّهُ آلدَارَ الْآخِرَةَ وَلَا تَنْسَ نَصِيكَ مِنَ الْدُنْيَا وَأَحْسِنْ كَمَا أَحْسَنَ اللَّهُ إِلَيْكَ وَلَا تَبْغِ الْفُسَادَ فِي الْأَرْضِ إِنَّ اللَّهَ لَا يُحِبُّ الْمَفْسِدِينَ 77

And look at what God has bestowed to you (happiness) in the Hereafter, and do not forget of (enjoyment) world and do good (to others) as Allah has done good to you, and do not mischief on the (face) earth. Allah loves not those who do mischief

This verse contains advice for not only the pure worship of God, but also pay attention to the needs of the world. Bend over backwards and mind (within limits justified God) to acquire wealth and properties in order to meet the needs of the world as well as the path to happiness hereafter. Said اميف according to Ibn 'Ashur implies majority or in general, once described the stuck into hearts that seek happiness hereafter with what is given by God in the life of the world [13].

Rasullullah Muhammad in Hadith also said: "Those who want to reach (achieve the interests of) the world, with science. Anyone who wants to embrace the Hereafter, then by science, and anyone who wants to embrace both, then by science. "From this hadith explicitly, Prophet declared that for Muslims to be able to achieve happiness in this world and in the hereafter, it is compulsory for them to learn all science, good science generally and the science of religion.

From a historical perspective, the scholars of Islam History have proven integrative figure as a scientist capable of providing exceptional contribution to the advancement of science, civilization, and humanity to continue to explore and enhance the intellectual treasures regardless of whether it works or not foreign. At the time of the Abbasid Caliphate recorded in the history of Islam from years 750-1517 AD / 132-923 H. Started by Caliph Abu al-'Abbas as-Saffah (750-754) and ends Alailah Caliph al-Mutawakkil III (1508-1517). With Waku fairly long range, around 767 years old, the Caliphate was able to show the world the height of Islamic civilization with the rapid development of science and technology in the Islamic world. In this era, was born Muslim scientists with discoveries that shake the world. Call it, al-Khwarizmi (780-850) who invented the zero and be immortalized in a branch of mathematics, algorithm (logarithm). There Ibn Sina (980-1037) which makes the air thermometer to measure the temperature of the air. Even his name famous in the West as Avicena, the Islamic Medical experts with scientific work Qanun (Canon), which became the reference medicine Western students.

In addition, there is the name Al-Kindi (801-873 AD) who was an Arab philosopher once religionists. He is a universal figure who ruled almost all branches of science of his time. Similarly, al-Farabi (870-950 AD), known as the "Second Teacher", after the first teacher of Aristotle. Ibn Sina (980-1037 AD), in addition to experts in the field of medicine, philosophy, psychology, and music, he is also a scholar. Al-Khwarizimi (780-850 AD) was a scholar who was a mathematician, astronomy, astrology, and geography.

Ibn Khaldun al-Hadrami (d. 808 H / 1332-1406M) known scholars' foundation stone of modern sociology. his master piece in Al-Muqaddimah, which until now many experts are

studying either from among the Muslims and the orientalism.

Of the existence of the religious leaders who are able to combine between religious knowledge and general (science) from various disciplines show that the amount of evidence to almighty Allah seen in nature that becomes the object of religious knowledge and religious texts (Qur'an and Hadith) the same time also be the object of sciences [14].

From the foregoing, it can be known that the substance that became central to the implementation of the integration of science is putting the principles of monotheism as the foundation of epistemology of science and not simply adopt the sciences of Western secular, materialistic, rational and empirical. In this case, Islam considers the science is not value-free, but is loaded with values of divinity and human values

Referring to the normative foundation of the Quran and Hadith and historical foundation of Islam, then the changes in the form and content of Islamic education in Indonesia in the form of integration of Islamic values in the study of science and technology is a necessity. Islamic educational institutions must have a vision of Islam as well the vision of modernity, present, future, and humanity that is compatible with the times. As the embodiment of the real to bridge these problems, it is done by continually make improvements and innovations in the implementation of Islamic education. Establishment of Islamic Elementary School (SDI) is one example for realizing a color Islamic education that integrates the values of Islam with science generally. The process of implementation of SDI implement education systems that integrate Islamic science combined with general science, who served with the presentation of a professional and always with the times with the hope born generation of Islamic competent and reliable in general science, which has a foundation of personality and attitudes appropriate with the teachings of Islam [15].

To that end, the process of integration of science in education philosophically done with a variety of models. Efforts to integrate the science in education can be done in three models Islamization of knowledge, namely the model of purification, modernization of Islam, and the Neo-modernism [5].

a. Model Purification

Purification means cleansing or purification. In other words, the process of Islamization trying to provide education to conform to Islamic norms and values kaffah, opponents of the partial Muslim. Then again, the commitment to maintain and preserve the teachings and values of Islam in all aspects of employment existence. As for four steps of the model Islamization as developed by Al-Faruqi and al-Attas, including: (a) the mastery of science and knowledge a Muslim, (b) mastery of science and knowledge of the present, (c) identifying the shortcomings of science in relation to the ideal of Islam, and (d) reconstruction of the sciences so that it becomes an alloy that is in harmony with the insight and the Islamic ideal [16].

b. Model Modernization of Islam

Modernization means the process of change in the nature or the laws. This model departs from concern for the backwardness of Muslims caused by the narrowness of the mindset to understand their religion, so in science

Islamic education system is lagging behind the non-Muslims. Islamization here tend to develop the message of Islam in the process of social change, the development of science and technology, adaptive to the times without leaving a critical attitude towards the negative and the process of modernization. Modernization means thinking and working according to the laws of nature or the right. To go on modernization, initially Muslims are required to understand the laws of nature (the command of Allah swt) will give birth next science. Modern means being scientific, rational, aware of the limitations and the truth is obtained relative, progressive-dynamic, and always have the spirit to move forward and get out of the slump and under development.

c. Model Neo-Modernism

This model seeks to understand the teachings and fundamental values embodied in the al-Quran and al-Hadith by considering the repertoire of the classical Muslim intellectuals as well as examine the difficulties and easiness offered by science and technology.

Islamization this model starting from methodological foundation; (A) contemporary issues people to look for an explanation of the tradition, the results of ijthihad of the scholars prior to the sunnah is the result of the interpretation of the Koran, (b) when it is in the tradition not found the appropriate answers to life contemporary, we then examine the socio - historical of the verses of the Koran were targeted ijthihad scholars, (c) through historical study will reveal the moral message of the Koran is actually a social ethics of the Koran, (d) of social ethics Koran was further observed relevance to the current race based aid results of a careful study of knowledge on the problems faced by the people.

Of the three models of the Islamization of the above, all of which aim to break the chain of the dichotomy of science in order to avoid the practice of sustainability science dichotomy in the world of education that hamper freedom of intellectual reasoning and rational empirical studies. Ditch effort dichotomy general science with religion led to the conception of their integration is expected to respond to the dynamics of science and technology rests on the rational-empirical model that is based on faith in Allah Almighty. An attempt to integrate the value kauniah with qauliah within the framework of Islamic learning in education institutions can be realized.

3. CONCLUSION

The integration between science and technology and IMTAQ basically an integration of science with religion. The wide variety of models of integration can be assessed and operationalized by education practitioners in the four-level conceptual level, institutional, and operational. The formulation of the national education goals contained in Law No. 20 of 2003 that the national education serves to develop the ability and character development and civilization of the nation's dignity in the context of educating the nation aimed at developing students' potentials in order to become a man of faith and fear of God Almighty, noble, healthy, knowledgeable, skilled, creative, independent, and become citizens of a democratic and accountable. Expression of

national education goals in it shades or contain an aspiration formation of human character Indonesia IMTAQ and science and technology.

Besides the integration of science and technology education and IMTAQ is necessary for four reasons. First, science and technology will give a blessing and a huge benefit to the welfare of mankind when science and technology is accompanied by the principle of faith and piety to Allah SWT. Both, in fact, science and technology is the basis of modernism, has led to new patterns and lifestyles that are s, materialistic, and hedonistic, very contrary to the values of the culture and the religion professed by our nations. Third, in life, people not only need physical needs, but also requires IMTAQ and religious values (spiritual needs) and Fourth, IMTAQ the foundation and most powerful base that will take humans achieve happiness in life.

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